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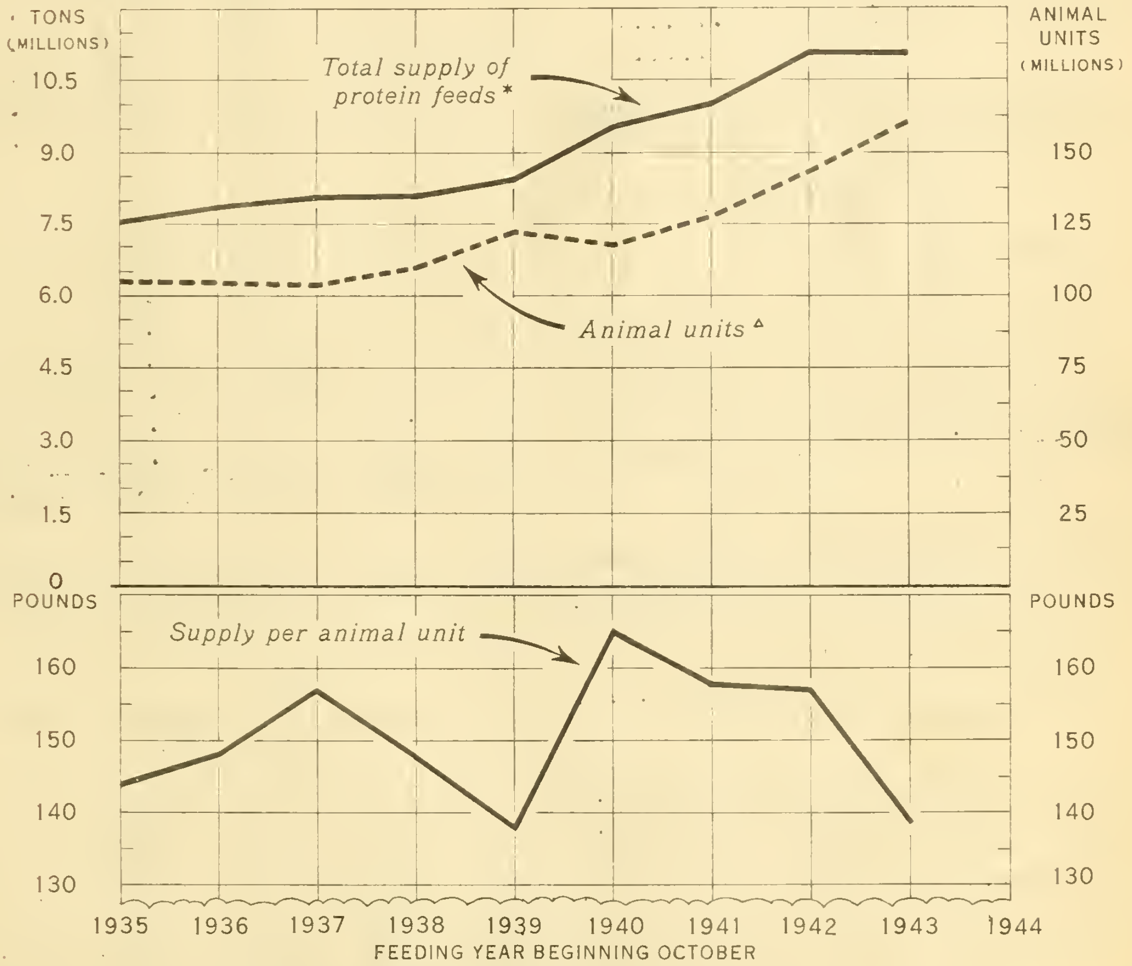
THE Feed SITUATION

BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE

FdS-49 BAE AUGUST 1943

In this issue:
HIGH PROTEIN FEEDS: CURRENT SITUATION AND OUTLOOK FOR 1943-44.

SUPPLY OF HIGH-PROTEIN FEEDS IN RELATION TO LIVESTOCK ON FARMS, UNITED STATES, 1925-43



* IN TERMS OF OIL MEAL EQUIVALENT

△ GRAIN-CONSUMING ANIMAL UNITS JAN. 1 OF FOLLOWING YEAR. EXCLUDING HORSES AND MULES. JAN. 1, 1944 TENTATIVELY ESTIMATED

U. S. DEPARTMENT OF AGRICULTURE NEG. 43237 BUREAU OF AGRICULTURAL ECONOMICS

Total supplies of high protein feeds for the 1943-44 feeding year beginning October 1 are expected to be nearly as large as in 1942-43, the all-time high, and considerably larger than in any other previous year. However, because of substantial increases in livestock numbers in the past year, indicating a record number on hand for the next feeding season, supplies per consuming animal unit may be about 10 percent less than in the 1942-43 feeding season, and considerably below the 1937-41 average. For data see table 5.

Table 1.- Market prices of feeds and livestock-feed price ratios, August 1941, 1942, and June-August 1943

Item	Unit	Aug. 1941	Aug. 1942	1943 June	1943 July	1943 Aug. 1/
		Cents	Cents	Cents	Cents	Cents
Grains						
Corn No. 3 Yellow, Chicago	Bu.	74.5	84.4	106.1	106.5	106.5
Oats No. 3 White, Chicago	"	37.3	49.0	68.7	71.0	69.6
No. 3 White, Minneapolis	"	35.9	44.1	65.6	66.1	66.7
Barley, No. 3, Minneapolis	"	51.4	64.0	98.6	105.0	106.2
Wheat No. 2 Hard Winter, Kansas City	"	106.6	111.2	137.0	140.1	139.2
Rye No. 2, Minneapolis	"	61.7	58.8	94.1	101.2	94.5
Byproduct Feeds						
Standard bran, Minneapolis	Ton	26.50	31.30	37.75	37.75	37.75
Chicago	"	28.30	33.35	39.90	39.90	39.90
Buffalo	"	30.00	35.40	41.55	41.55	41.55
Standard Middlings, Minneapolis	"	26.80	31.40	37.75	37.75	37.75
Chicago	"	28.50	33.60	39.90	39.90	39.90
Buffalo	"	30.05	35.10	41.55	41.55	41.55
Cottonseed meal, 41 pct. protein, Memphis	"	34.45	35.20	38.50	38.50	49.00
Linseed meal, 34 pct. protein, Minneapolis	"	2/33.50	34.75	43.50	43.50	45.50
30 pct. protein, San Francisco	"	35.05	42.25	43.00	43.00	47.00
Peanut meal, 45 pct. protein, S. E. milling points		32.95	36.60	38.00	38.00	50.00
White hominy feed, Chicago	"	28.75	35.25	48.50	45.95	47.50
Gluten feed, 23 pct. protein, Chicago	"	24.40	29.25	32.50	---	---
Tankage, digester, 60 pct., Chicago	"	62.50	3/71.00	3/71.05	3/71.05	3/71.05
Meat scraps, Chicago	"	61.55	3/68.00	3/68.00	3/69.00	3/70.00
Fish meal, San Francisco	"	68.90	79.00	79.50	79.50	79.50
Alfalfa meal, No. 1 fine, Kansas City	"	22.95	31.40	32.95	33.20	33.20
		Pct.	Pct.	Pct.	Pct.	Pct.
Indexes of Feed Prices 4/						
Feed grains, United States, 1910-14=100		101	123	163	166	5/169
Oilseed meal, terminal markets, 1935-39=100		118	129	6/134	6/134	6/7/166
Livestock byproduct feeds and fish meal, terminal markets, 1935-39=100		141	160	8/160	8/160	7/8/161
Ten principal high-protein feeds, terminal markets, 1935-39=100 9/		121	134	8/140	8/140	7/8/162
Indexes of Livestock-Feed Price Ratios 10/						
Hog-corn ratio, Chicago, 1920-39=100		128	152	114	113	11/116
Beef-corn ratio, Chicago, 1920-39=100		116	130	111	110	11/107
Butterfat-feed ratio, United States, 1920-39=100		115	106	110	106	5/100
Egg-feed ratio, United States, 1931-40=100		119	119	125	119	5/111

1/ Grain prices, average for week ended August 14, byproduct feed prices as of August 17. 2/ 37-percent protein. 3/ Bulk. 4/ For method and data for earlier months and years see issues of "The Feed Situation" for December 1941 and April 1942. 5/ Preliminary. 6/ Partly estimated. 7/ August 17. 8/ Includes some prices for bulk sales. 9/ Revised to exclude copra meal. 10/ Average for corresponding month in base period = 100. Index numbers above 100 indicate that ratios are favorable to livestock producers. See table 1, "The Feed Situation," February 1942. 11/ Week ended August 14.

THE FEED SITUATION

Summary

The 1943-44 supply of feed grains, including wheat and rye for feed, based on August 1 crop prospects, is 144 million tons, 10 million tons smaller than in 1942-43, but an increase of about 7 million tons over the prospective supply a month earlier. Except for that of 1942-43, this would be the largest supply on record and 19 percent above the 1937-41 average. The increase in the prospective feed supply since July 1 reflects a gain of 168 million bushels in the indicated 1943 corn crop and some increase in the wheat crop, which would make a little larger quantity of wheat available for feed during 1943-44 than was expected earlier. The total supply of protein feeds in 1943-44 may be a little larger than in 1942-43 but smaller than last year in relation to livestock to be fed.

The total quantity of feed concentrates available for livestock feeding during the year beginning October 1943, after making allowance for the reduction in stocks of feed grains, imports from Canada, and the utilization of feed grains for food, industrial uses, and seed is 134 million tons, 7 percent smaller than the quantity fed in 1942-43, but 34 percent above the 1937-41 average. Unless more comprehensive steps are taken to manage the total feed supply than were taken last year, the greatest reduction in 1943-44 feed supplies will be in deficit feed areas, since less feed wheat will be available for these areas and probably less corn will be available for shipment from the Corn Belt in 1943-44.

Price ceilings on oilseed cakes and meals from the 1943 oilseed crops were raised on July 31 to bring about a more nearly normal relation between prices of oilmeals and prices of other feeds and livestock products. The

new ceilings permitted an increase in the price of soybean meal at Chicago from $40.40 per ton to $51.90 per ton and in cottonseed meal at Memphis from $38.50 per ton to $49.00 per ton. Farmers greatly increased marketings of corn during the first 10 days of August and 35 million bushels were purchased by the Commodity Credit Corporation. This corn has been used to meet the requirements of corn processors and livestock feeders in deficit feed areas.

-- August 26, 1943

REVIEW OF RECENT DEVELOPMENTS

BACKGROUND.- The supply of feed grains and byproduct feeds has increased each year since 1936, reaching a record level in the 1942-43 marketing year. The number of livestock on farms also has reached a record level and livestock numbers will increase further from January 1, 1943, to January 1, 1944. Government-held stocks of corn have been practically depleted and 275 million bushels of Commodity Credit Corporation wheat were sold for feed in the 1942-43 fiscal year. Prices of feed grains and byproduct feeds advanced sharply during 1942-43, largely because of the increased demand for feed and industrial uses. Price ceilings have been set on corn and practically all byproduct feeds. Sales of these feeds in the principal markets have been at the ceilings.

Feed Grain Prospects Improved Since July 1

The 1943 corn crop was forecast at 2,875 million bushels on the basis of the condition August 1, 300 million bushels smaller than the 1942 crop but 168 million bushels larger than was indicated for 1943 by the July 1 crop report. Growing conditions have been fair to excellent over most of the Corn Belt since July 1, but feed crops have been damaged by drought conditions over two broad areas, one centering in Maryland and one in Oklahoma and Arkansas.

Assuming a carry-over of 400 million bushels on October 1, there would be a supply of 3,275 million bushels of corn for the coming year. This would be 11 percent smaller than last year and slightly smaller than the 1941 supply, but larger than in other recent years.

The 1943 oats crop was indicated on the basis of August 1 condition at 1,190 million bushels, a decrease of 52 million bushels from the July 1 forecast and 169 million bushels or about 12 percent below 1942 production. The 1943 barley crop was indicated August 1 to be 349 million bushels, 18 percent below the 1942 crop, but nearly half again larger than the 1932-41 average of 243 million bushels.

Prospective production of sorghums for grain was 124 million bushels on August 1, materially larger than the 107 million-bushel production in 1942 and more than twice as great as the 1932-41 average.

Corn Marketings Increase

Receipts of corn at primary markets for the week ended August 13 totaled 4.9 million bushels. This was twice the volume of the previous week and was materially greater than for any other week since mid-May. From mid-May until early August the flow of corn to primary markets dropped to a low level and commercial corn supplies were much below trade requirements.

Thirty-five million bushels of corn were purchased by the War Food Administration between July 1 and August 10 under the program assuring sellers that they would receive the benefits of any rise in price before October 31, 1943, should one occur. Of this quantity 23 million bushels were sold to corn processing plants making direct war products, and 2 million retained by the Commodity Credit Corporation as a war emergency reserve. The remainder is being distributed through regular trade channels to feeders and feed mixers and some dry corn millers.

Commercial stocks of corn in the United States were reported below 5.7 million bushels on August 17 compared with 8.5 million bushels a month earlier This reduction in corn stocks is a continuance of the decline that has been apparent since mid-March 1943, when commercial stocks totaled about 50 million bushels. Receipts of oats and barley at primary markets have been running much larger in recent weeks than in the corresponding weeks a year earlier or for the average of the 5-year period, 1937-41.

Ceiling Prices on Oilseed Meals Increased

Ceiling prices of oilseed cakes and meals produced from the 1943 oilseed crop were raised on July 31 in an effort to bring prices of these feeds more nearly in line with other feed prices and to bring about a more equitable distribution of the supplies of these feeds. Comparatively stable ceilings on these feeds, associated with the rapidly rising feed grain prices of the past year, had made oilmeals cheap in relation to grains and encouraged liberal feeding. Thus, while supplies of the oilmeals have been at record levels during the last year, demand has greatly exceeded supply; and these feeds have been virtually unobtainable to livestock feeders in many areas. A more nearly normal relationship between prices of oilmeals and prices of feed grains will tend to encourage a more equitable distribution of these feeds among feeders.

In response to increased ceilings, market price quotations moved up by about the amount permitted by the higher ceilings. Quotations on soybean meal at Chicago (41 percent protein wholesale in bagged ton lots) rose $11.50 per ton in the week ended August 3, closing at $51.90, while cottonseed meal (41 percent protein) increased $10.50 at Memphis to reach $49.00 per ton. The price of linseed meal increased from $43.50 to $45.50 per ton at Minneapolis. Concurrent with the increase in ceiling prices, processors were required to set aside for sale and delivery to the Commodity Credit Corporation at the previous ceiling prices all stocks of oilseed meals on hand August 1 and all produced thereafter from the 1942 oilseed crop.

Prices of Feed Grains Supported by Strong Demand

Corn prices continue strong at ceiling levels, with prices nominal at some markets, but no sales reported. Prices of oats and barley at principal markets advanced contra-seasonally from May to July, then declined 1 to 3 cents per bushel from mid-July to mid-August. The price of No. 3 White oats at Chicago averaged 70 cents per bushel during the week ended August 14, 20 cents higher than a year earlier, and No. 3 barley at Minneapolis was $1.06 per bushel, 36 cents higher than a year earlier. Market prices of these grains are somewhat higher per pound than corn prices.

The market price of grain sorghums also declined from mid-July to mid-August, but the price of grain sorghums is still high in comparison with corn on the basis of feeding value or normal price relationships. The price of No. 2 Yellow Milo at Kansas City was $2.60 per 100 pounds on August 14, or 17 cents above the June average, over twice the November 1942 level, and 37 percent higher per 100 pounds than No. 3 Yellow corn at Chicago. Unavailability of corn at ceiling prices in sufficient volume to meet demands of feeders, mixed feed manufacturers, and industrial processors has strengthened the demand for other feed grains.

OUTLOOK

Prospects for 1943-44 Feed Grain Supplies Improve

The 1943-44 prospective supply of feed grains, based on August 1 crop conditions, is 144 million tons, 7 million tons larger than was indicated July 1, and 23 million tons above the 1937-41 average, but 10 million tons smaller than the 1942-43 supply. This supply includes domestic wheat and rye available for feed and expected imports of feed wheat, oats, and barley from Canada. The increase in feed-grain prospects from July 1 to August 1 reflects improvement in prospects for the 1943 corn crop and an increase in the estimated wheat crop, which may make a greater quantity of wheat available for feed than was expected earlier.

The supply of feed grains now in prospect for 1943-44 is about 15 percent smaller in relation to the expected number of livestock on farms next January 1 than the supply per animal in 1942-43, and about 10 percent smaller per animal than the 1937-41 average.

Table 2.- Supply of feed grains in relation to grain-consuming livestock, average 1937-41, annual 1941-43

Crop year	Supply							Grain-consuming animal units 1/	Supply per animal unit
	Corn Oct. 1	Oats July 1	Barley June 1	Grain sorghum production	Wheat fed July-June	Rye fed July-June	Total supply		
	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels	Tons	Million	Tons
Average:									
1937-41	3,051	1,303	335	77	122	19	120.7	132.6	.91
1941	3,321	1,404	432	112	112	20	132.9	143.1	.93
1942	3,668	2/1,609	2/525	107	313	27	2/154.2	158.9	.97
1943 3/	3,275	2/1,484	2/473	124	425	40	2/144.1	175.0	.82

1/ Number of livestock on farms January 1 converted to grain-consuming animal units.
2/ Includes imports.
3/ Preliminary forecast.

About 7 Percent Less Concentrates Available For Feeding During Year Beginning October 1943

The supply of feed concentrates available for livestock feed in the 1943-44 feeding year, beginning October 1, is expected to be about 7 percent smaller than the estimated quantity of feed fed during the period October-September 1942-43. This is based on August 1 crop prospects, expected change in stocks of feed grains, and excludes feed used for food, industrial purposes, or seed. This decrease reflects the smaller quantity of wheat that will be available for feed after October 1, 1943, than in 1942-43 and the prospective smaller corn crop this year than last.

Government wheat has been a major source of feed during the past year, especially in the deficit feed areas. At the present rate of sales, stocks of Government-owned wheat would be reduced to less than 100 million bushels by next October 1. This would mean that about 470 million bushels of wheat, including that fed on farms, will have been fed to livestock during the feed marketing year beginning October 1, 1942. In 1943-44 the quantity fed will depend on deliveries of wheat now under loan to the Government, Government policy regarding holding of reserve stocks, imports from Canada, and the size of the 1944 crop, which would influence feeding next July-September. Furthermore, in August the Commodity Credit Corporation began purchasing wheat at loan rates through the Government purchasing program. This might increase somewhat the amount available for feed during the coming feeding year. In any event, however, wheat feeding is expected to be much smaller during the period October-June 1943-44 than in these 9 months of 1942-43. The total quantity of wheat fed in the 1943-44 year beginning October 1 may approximate 250 million bushels or a little over one-half of the quantity fed in 1942-43.

Table 3.- Feed concentrates consumed by livestock and livestock production, United States, average 1937-41, annual 1941-43

Year	Feed concentrates consumed by livestock 1/									Livestock production units 2/	Feed concentrate consume per livestoc unit
	Corn	Oats	Barley	Grain sorghums	Wheat fed	Rye fed	Oil-cake and meal	Other by-product feeds 2/	Total		
	Year beginning Oct.									Calendar year	
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	1,000 tons	1,000 tons	Mil. tons	Mils.	Tons
Average 1937-41	2,225	1,004	190	77	131	19	3,924	6,847	100.3	153.9	.65
1941-42	2,530	1,086	249	112	170	24	4,670	7,725	115.5	175.2	.66
1942-43 3/	2,987	1,254	329	107	470	33	6,100	8,430	144.1	205.3	.70
1943-44 4/	2,870	1,185	315	124	250	35	6,375	8,875	134.1	5/ 196.6	5/ .68

1/ Domestic disappearance excluding quantities used for purposes other than livesto feed.
2/ For footnotes, see table 4.
3/ Preliminary.
4/ Expected.
5/ Production in 1943-44, assuming a rate of feeding the same as the average for 1941-42 and 1942-43.

Based on the present outlook for feed supplies, it is estimated that about 134 million tons of feed concentrates will be available for feeding in the year beginning October 1943. This would be 10 million tons smaller than the quantity fed in 1942-43, but 34 million tons larger than the 1937-41 average. This estimate includes an allowance for imports of oats, barley, and feed wheat from Canada and feed from reserve stocks of domestic grain that will be fed next year in addition to grain fed from the 1943 domestic crops, and excludes grains and oilmeal used for purposes other than livestock feed. Corn stocks probably will be reduced to about 150 million bushels by October 1, 1944, and there will be similar reductions in oats and barley stocks.

Feed disappearance increased more than livestock production from the average for 1937-41 to 1942-43. The quantity of feed consumed per unit of livestock production was 8 percent larger than average in 1942-43 and 6 perce above that of 1941-42. Considering the over-all livestock feed situation, if the rate of feeding should be reduced to the average of 1941-42 and 1942-43, total livestock production may be only 3 or 4 percent smaller in 1943-44 than in 1942-43, with the smaller quantity of feed available for feeding. The volume of production by areas, however, may differ considerably from that of 1942-43.

Outlook For Feed Supplies by Areas

Smaller supplies of wheat for feed may mean a greater reduction in feed supplies in the deficit feed areas than in the heart of the Corn Belt, since feed wheat made up a greater part of the feed supplies in these areas than in the Corn Belt during 1942-43. In the North Atlantic area, locally grown feed supplies have not changed much in recent years and a large part of the increase in livestock production has been made possible by in-shipments of Government feed wheat.

In table 4 the quantity of feed fed to livestock is estimated for three sections of the Corn Belt and by geographical regions for the other areas of the country. These estimates are based on production of feed grains by States, change in stocks, rail movement, and imports. Deductions have been made by States for estimated quantities used for purposes other than feeding. It is assumed that about as much oats and barley will be shipped from surplus to deficit areas in 1943-44 as in 1942-43, but about one-fourth less corn. It is also assumed that Government stocks of wheat will not be reserved for deficit areas or that additional steps will be taken to move larger supplies of domestic feeds into these areas. With these assumptions, the supply of feed concentrates available for feeding in the North Atlantic area and in the West in 1943-44 would be about 15 percent less than in 1942-43. In the eastern Corn Belt and in the South Central States, feed supplies may be about 10 percent less. In Maryland, Virginia, and Delaware the drought that has developed in recent months has substantially reduced the production of locally-grown corn and hay crops and may cause a greater deficit in this section in 1943-44 than in other sections of the East. In the western Corn Belt States and in the South Atlantic area, feed available for livestock is indicated to be about as large as in 1942-43, while in the central Corn Belt States supplies may be somewhat smaller, except in Iowa, where the above average corn reserve may permit increased feeding.

Statistics on the movement of mixed feeds or the movement of feed by truck are not available at this time, so that these regional figures will be subject to some revision when more complete data on feed movement between States become available from the survey of the feed industry now being conducted by the Department of Agriculture.

The production of livestock and livestock products in the various areas in 1944 will depend upon the rate of feeding per unit of livestock produced, as well as the quantity of feed available. The rate of feeding concentrates increased in all areas of the country from 1941-42 to 1942-43 except in the South. The increase in the rate of feeding was large in the North Atlantic States, the Western States, and in the western part of the Corn Belt. This heavier rate of feeding indicates that concentrates replaced roughages to some extent, but it also reflects a smaller return in livestock production per 100 pounds of concentrates fed.

Assuming that, with smaller feed supplies in 1943-44, the rate of feeding concentrates per unit of livestock produced will be about the same as the average for 1941-42 and 1942-43, the total livestock production would be reduced in all areas of the country in 1944 except in the western Corn Belt, as is shown in table 4. In the western Corn Belt, 1943-44 feed supplies will be about as large as in 1942-43 and a moderate reduction in the rate of feeding, which was very heavy in 1942-43, would result in a little larger livestock production in 1944 than in 1943. For the country as a whole, with

Table 4.- Estimated quantities of feed concentrates consumed by livestock in relation to livestock production, by areas, 1941-44 1/

Region	Feed consumed by livestock 1/				Livestock production units 2/		Feed consumed per livestock production unit		Livestock production in 1944 with 1941-42 and 1942-43 average rate of feeding per unit	
	1941-42	1942-43	Available for feed in 1943-44	1943-44 as a percentage of 1942-43	1942	1943	1941-42	1942-43	Total	Percentage of 1943
	Year beginning October				Calendar year					
	Million tons	Million tons	Million tons	Percent	Million units	Million units	Tons	Tons	Million units	Percent
North Atlantic	9.7	12.3	10.6	86	12.6	13.6	.77	.90	12.7	93
Ohio, Indiana, and Michigan	15.5	18.0	16.4	91	20.8	23.3	.75	.77	21.5	92
Illinois, Wisconsin, Minnesota, Iowa, and Missouri	44.4	54.5	51.9	95	62.9	73.6	.71	.74	71.8	98
N. Dakota, S. Dakota, Nebraska, and Kansas	13.2	20.2	20.0	99	20.8	26.2	.63	.77	28.3	108
South Atlantic	8.3	9.3	9.2	99	12.4	14.8	.67	.63	14.2	96
South Central	17.9	20.3	17.9	88	29.2	35.3	.61	.58	30.3	86
Western	6.5	9.5	8.1	85	16.5	18.5	.39	.51	17.8	96
Total United States	115.5	144.1	134.1	93	175.2	205.3	.66	.70	196.6	96

1/ Four feed grains, wheat, rye, oilcake and meal, millfeeds, corn gluten feed, brewers' and distillers' dried grains, dried beet pulp, and estimated production of hominy feed and oat feed available for livestock feeding during the year beginning October 1.

2/ Production of livestock and livestock products weighted as follows: 100 pounds milk, .0236; 100 dozen eggs, .54; 100 pounds chickens (live weight), .359; 100 head broilers, .86; 100 head turkeys, 5.1; 100 pounds live hogs, .318; 100 pounds (live weight) cattle and calves, .157; 1 head sheep and lambs on farms January 1, .027; and 1 head work stock January 1, 1.11. Taken from U.S.D.A. circular 670, "Feed Consumption by Livestock, 1910-41," by R. D. Jennings.

Livestock Production Units are computed in this table to show the combined production of livestock and livestock products by calendar years weighted on the basis of the average quantity of feed concentrates required to produce these products. The livestock production unit is equivalent to 4,237 pounds of milk or about the long-time average quantity produced per milk cow per year. The production of other livestock products when multiplied by the factors listed above are converted to equivalent production units. These units are not interchangeable with grain-consuming animal units, since the latter are based on livestock numbers January 1.

feeding per unit of livestock production about the same as the average for the past 2 years, total livestock production would be about 4 percent smaller.

Large Hay Supply in Prospect

The indicated production of all hay August 1 was 99 million tons, 1 percent less than on July 1, but 10 percent greater than the 1937-41 average, and larger than for any recent year except for the record high of 105 million tons harvested in 1942. Including the larger than normal carry-over of hay, the supply of hay in prospect for the 1943-44 feeding season is 112 million tons, 4 percent smaller than in 1942-43.

HIGH-PROTEIN FEEDS: CURRENT SITUATION AND OUTLOOK FOR 1943-44

The total supply of high-protein feeds for 1943-44 converted to oilmeal equivalent is expected to be about 11.6 million tons, slightly above the estimated supply for 1942-43, and the largest supply on record. The prospective supply in relation to livestock consuming these feeds, however, is 8 percent smaller than in 1942-43 but about the same as the 1935-39 average. Because of the prospective smaller supply of all feed consumed by livestock in 1943-44, the protein content of the entire feed supply may be as high as or a little higher than in 1942-43.

Slightly More Oilcake and Meal in Prospect in 1943-44

Production of oilcake and meal in 1943-44 is expected to be larger than in 1942-43, but stocks carried over will be much smaller and the equivalent of 500,000 to 600,000 tons of soybean meal is scheduled to be used for food, compared with about 200,000 tons in 1942-43. Cottonseed cake and meal production may be a little smaller next year because of the prospective smaller cottonseed crop, while the larger 1943 production of flaxseed and peanuts in prospect may result in larger production of linseed and peanut meals. The total supply of oilmeal available for feed is expected to be slightly larger than in 1942-43, as shown in table 5.

Not Much Change in Supplies of Animal Proteins

The total quantity of animal protein feed available in the feed marketing year beginning October 1943 may be about as large as in 1942-43. An increase in the production of tankage and meat scraps is in prospect because of the increased slaughter of livestock, and about the same production of fish meal. However, less skim milk and milk products will be available for feeding, which may about offset the increase in tankage and meat-scrap production.

Supplies of animal protein in 1943-44 will again be much smaller than the requirements of livestock, unless a reduction in numbers of livestock should occur. In this event the large production of tankage and meat scraps, together with a smaller number of livestock, would result in larger supplies of these feeds per animal and some loosening of the animal protein situation.

Larger Supplies of Other Protein Feeds

Supplies of other protein feeds may be 100,000 to 125,000 tons larger next year than this, because of the increase in production of distillers' dried grains. New recovery equipment to be installed in distilleries and new distilleries being constructed are expected to increase the production of distillers' dried grains by about one-third in 1943-44. Production of corn gluten feed and meal may be about the same in 1943-44 as during 1942-43, but much will depend on the quantity of corn available to these industries. If sufficient corn is available to permit these industries to run at capacity for the entire year, production may be a little larger than this year, when floods and a shortage of market supplies of corn interfered with wet processing of corn during the spring and summer months. Brewers' dried grains may be a little smaller because of the smaller production of malt liquors in prospect.

Total Protein Feeds Supply Smaller in Relation to Livestock than in 1942-43

Altogether, supplies of protein feeds are expected to be about 8 percent smaller in 1943-44 in relation to livestock on farms than in 1942-43, assuming that livestock numbers will continue to increase during 1943 and will be about 10 percent greater next January 1 than last. The total prospective supply of protein feeds available for feeding in 1943-44 is slightly more than in 1942-43, but a smaller disappearance of feed grains is expected, so that the feed consumed by livestock in 1943-44 may contain about the same as or a little higher percentage of protein than in 1942-43.

Current Protein Situation

The production of four oilcakes and meals was 59 percent greater during April-June than in that quarter of 1942. During July-September it is expected to be about 45 percent greater. This increase in production reflects the greater output of soybean meal, which has been produced at about double the 1942 rate since January 1. Production of brewers' and distillers' grains also was somewhat larger in the first 6 months of this year than last. Gluten feed was running somewhat greater than a year earlier up to May 1, but since May 1 a shortage of corn in commercial channels and floods have curtailed the production of the wet-processing industry.

Although total production of these feeds has been much larger than average this year and unseasonally large since April 1, the favorable relation between prices of these feeds and other feeds and livestock products, together with the large number of livestock on farms, has prevented the usual slackening of demand during the summer months and prices of these feeds have remained at the ceiling levels. Dairymen may have reduced the quantity of oilmeal fed to their cows by about the usual amount this summer, as pastures have been good over most of the country, but the strong demand for protein feed from hog and poultry producers has resulted in the feeding of all current production of oilmeal since the beginning of the year.

Current data have not been compiled on production of the animal protein feeds. But as a result of the larger slaughter of livestock, meat

Table 5.- High-protein feeds: Supplies available for livestock feeding, 1935-43 1/

Feed	1935	1936	1937	1938	1939	1940	1941	1942 2/	1943 3/
	Year beginning October								
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Oilcake and meal									
Cottonseed	1,842	2,201	2,576	2,129	1,851	2,025	1,962	2,100	2,000
Soybean	633	552	740	1,042	1,299	1,526	1,825	3,125	4/3,100
Linseed	263	273	177	203	393	740	891	775	1,050
Peanut	48	67	50	77	43	146	70	95	225
Total	2,786	3,093	3,543	3,451	3,586	4,437	4,748	6,095	6,375
Animal proteins									
Tankage and meat scraps	643	634	608	667	728	811	874	882	965
Fish meal	251	290	215	236	240	257	208	179	180
Skim milk and products 5/	1,775	1,705	1,795	1,780	1,765	1,825	1,725	1,655	1,555
Total	2,669	2,629	2,618	2,683	2,733	2,893	2,807	2,716	2,700
Miscellaneous feeds									
Gluten feed and meal	588	511	545	567	614	759	962	960	960
Distillers' grains	240	230	150	149	164	206	345	370	500
Brewers' grains	99	110	104	104	101	117	169	225	210
Copra meal	128	137	117	129	179	174	72	35	35
Total	1,055	988	916	949	1,058	1,256	1,548	1,590	1,705
Total (weighted) 6/	7,528	7,728	8,111	8,139	8,427	9,657	10,042	11,282	11,618
	Supply per animal unit								
Animal units 7/ Jan. 1 following (millions)	104.5	104.4	103.6	110.1	122.0	117.3	127.4	143.7	160.0
Supply per animal unit (pounds)	144	148	157	148	138	165	158	157	145

1/ Production, plus imports, minus exports, plus stocks of cottonseed meal and peanut meal October 1, minus cottonseed meal used for fertilizer and soybean meal used for food. Estimated production of tankage and meat scraps for entire industry.

2/ Preliminary.

3/ Expected.

4/ Assumes about 15 million bushels of soybeans will be fed or wasted in 1943-44.

5/ Skim milk, whey, and buttermilk fed on farms, plus milk products produced for feed.

6/ Weighted as follows: oilcake and meal, 1.00; animal proteins, 1.50; miscellaneous feeds, 0.70.

7/ Grain-consuming animal units, excluding horses and mules.

scrap and tankage production is estimated to be a little larger this year than last. A much larger quantity of tankage and liver meal is expected to be imported this year than in 1942. Fish meal production and imports together are expected to be about as large in 1943 as in 1942, but the quantity of skim milk and milk products available for feed may be about 4 percent less.

Table 6.- Production of principal vegetable protein feeds, quarterly, 1937-43

Year beginning Oct. 1	Oct.-Dec.	Jan.-Mar.	Apr.-June	July-Sept.	Total	Oct.-Dec.	Jan.-Mar.	Apr.-June	July-Sept.	Total
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
	Soybean cake and meal					Gluten feed and meal				
1937-41	356	367	311	271	1,305	167	170	177	175	689
1941	460	490	443	452	1,845	228	242	249	243	962
1942	599	905	990 1/	860 2/	3,354	253	253	234 1/	220 2/	960
	Cottonseed cake and meal					Brewers' dried grains				
1937-41	889	622	242	304	2,057	22	25	34	38	119
1941	771	525	196	298	1,790	29	33	42	65	169
1942	939	558	203 1/	300 2/	2,000	52	51	60 1/	60 2/	223
	Linseed cake and meal					Distillers' dried grains				
1937-41	167	161	137	151	616	49	54	53	47	203
1941	233	239	223	207	902	69	84	95	98	346
1942	219	191	173 1/	200 2/	783	94	90	86 1/	100 2/	370
	Total four oilcakes and meals 3/					Copra cake and meal				
1937-41	1,431	1,172	709	732	4,044	21	21	18	17	77
1941	1,490	1,263	870	971	4,594	23	13	5	9	50
1942	1,782	1,691	1,386 1/	1,385 2/	6,244	6	9	10 1/	10 2/	35

1/ Expected.
2/ Partly estimated.
3/ Includes peanut cake and meal.

Regional Distribution of Oilmeal Fed to Livestock

The quantity of oilmeal fed to livestock varies greatly among the different regions of the country. Estimates of the quantities fed by States indicate that the quantity fed per unit of livestock production is the largest in the North Atlantic area, where much of the feed is mixed by commercial feed manufacturers, and least in the western part of the Corn Belt, where locally-grown grains furnish the bulk of the feed for livestock. Even with the large increase in soybean meal from 1941-42 to 1942-43, the pounds of oilmeal fed per livestock production unit in the North Central area were still much below the average for the country.

Although farmers in the Midwest feed considerable quantities of skim milk, tankage, and meat scraps, in addition to oilmeal; these data indicate that the smallest amount of protein feeding relative to livestock numbers is in the area from the Rocky Mountains to Ohio lying north of the Cotton Belt. In this area much of the feed is grown locally, and the quantity of supplements purchased is generally small.

In the North Atlantic area and on the Pacific Coast, much more of the feed is mixed commercially than in the Midwest. Commercial mixtures ordinarily contain enough oilmeal and other protein feed to be self-balancing, which largely accounts for the relatively greater quantity of oilmeal fed in these areas than in the Corn Belt. More than one-third of the oilcake and meal used in the Pacific Coast States during the past 2 years, and about one-half of that used in the North Atlantic area, has been shipped in.

A large part of the oilmeal fed in the South is cottonseed meal, which is used primarily for cattle feed. In addition to the oilcake and meal fed in the Southern States, cottonseed, cowpeas, peanuts, and velvet beans are used for feed, and help to balance livestock rations. Cattle rations probably are more than balanced in most of the Southern States, while hog and poultry rations probably are deficient in protein content.

Table 7.- Estimated quantities of oilmeal fed to livestock in relation to livestock production, by regions, 1941-42 and 1942-43

Region	1941-42			1942-43		
	Oilmeal fed 1/	Livestock production units 2/	Oilmeal per livestock production unit	Oilmeal fed 1/	Livestock production units 2/	Oilmeal per livestoc productio unit
	1,000 tons	Millions	Pounds	1,000 tons	Millions	Pounds
North Atlantic	750	11.7	128	910	12.5	146
East North Central	950	39.7	48	1,312	43.1	61
West North Central	753	58.3	26	1,179	68.0	35
South Atlantic	525	10.8	97	660	13.1	101
South Central	1,213	24.7	98	1,405	29.7	95
Rocky Mountain	132	7.3	36	171	8.1	42
Pacific Coast	347	7.5	93	463	8.3	112
Total United States	4,670	160.0	58	6,100	182.8	67

1/ Four oilcakes and meals and copra meal. Regional distribution estimated on basis of oilseed crushed by States reported by census, rail movement of cake and meal and statistics furnished by oilseed crushing associations on shipments of cake and meal by States with adjustment for estimated quantities shipped between regions in mixed feed.

2/ Production of livestock and livestock products, excluding horses and mules. For weights see table 4.

Utilization of oilmeal per animal unit is shown in table 7 for the various regions of the country for the past 2 years. In the western part of the Corn Belt, the quantity of oilmeal fed is only about one-fourth as large per unit of livestock products as in the North Atlantic area. Even with the large increase in soybean meal production from 1941-42 to 1942-43, the pounds of oilmeal fed per livestock production unit in the North Central area were still much smaller than in the North Atlantic or Pacific Coast areas or the average for the country as a whole.

Table 8.- Corn, oats, barley, and hay: Supply and distribution in the United States, average 1937-41, annual 1942 and 1943

Year beginning	Carry-over: Farm	Carry-over: Commercial	Carry-over: Total	Production	Total supply	Net exports	Domestic disappearance
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
October 1				Corn 1/			
Average							
1937-41	396,123	22,163	2/468,685	2,582,151	3,050,836	3/57,189	2,447,164
1942	423,758	38,641	2/492,399	3,175,154	3,667,553		4/3,259,553
1943			5/400,000	2,874,711	4/3,274,711		
July 1				Oats 6/			
Average							
1937-41	169,151	4,308	173,459	1,129,976	1,303,435	3/7/ -431	1,108,916
1942	192,398	2,109	194,507	1,358,730	1,553,237		1,365,297
1943	236,444	7,746	244,190	1,189,546	1,433,736		
June 1				Barley 8/			
Average							
1937-41	43,431	6,080	49,511	285,540	335,051	3/ 4,766	270,353
1942	76,743	4,541	81,284	426,150	507,434		421,048
1943	95,272	8,767	104,039	348,848	452,887		
May 1				Hay			
			1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Average							
1937-41			11,846	89,962	101,808	3/7/ -6	88,915
1942			11,260	105,328	116,588		103,190
1943			13,398	99,099	112,497		

1/ Corn, including meal. 2/ Includes corn under seal or owned by the Government at country points. 3/ Average 1937-40. 4/ Partly estimated. 5/ Estimated. 6/ Oats, including oatmeal. 7/ Net imports. 8/ Barley, including barley flour and malt.

Table 9.- Production and stocks of specified byproduct feeds, July 1941 and 1942, and May-July 1943

Item	July: 1941	July: 1942	1943: May	1943: June	1943: July
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Production					
Cottonseed cake and meal	35.5	32.1	67.6	41.7	28.1
Soybean cake and meal	---	---	327.2	304.8	---
Linseed cake and meal	---	---	48.4	66.2	---
Peanut cake and meal	3.8	8.8	5.4	4.9	7.1
Gluten feed and meal	66.1	80.8	79.6	69.6	1/ 69.6
Brewers' dried grains	14.3	21.5	18.6	22.7	23.7
Distillers' dried grains	14.9	32.8	30.2	26.7	28.1
Wheat millfeeds	372.8	380.7	377.5	407.8	2/380.0
Stocks, end of month					
Cottonseed cake and meal	164.4	190.1	36.3	29.6	18.6
Peanut cake and meal	16.0	7.4	2.5	2.2	2.0

1/ Domestic grind only. 2/ Preliminary.

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